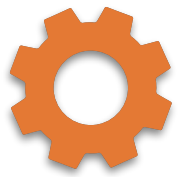


# SVOM SCIENCE DATABASE

*4th SVOM scientific workshop - Nanning,  
Chrystel Moreau  
[chrystel.moreau@lam.fr](mailto:chrystel.moreau@lam.fr)*

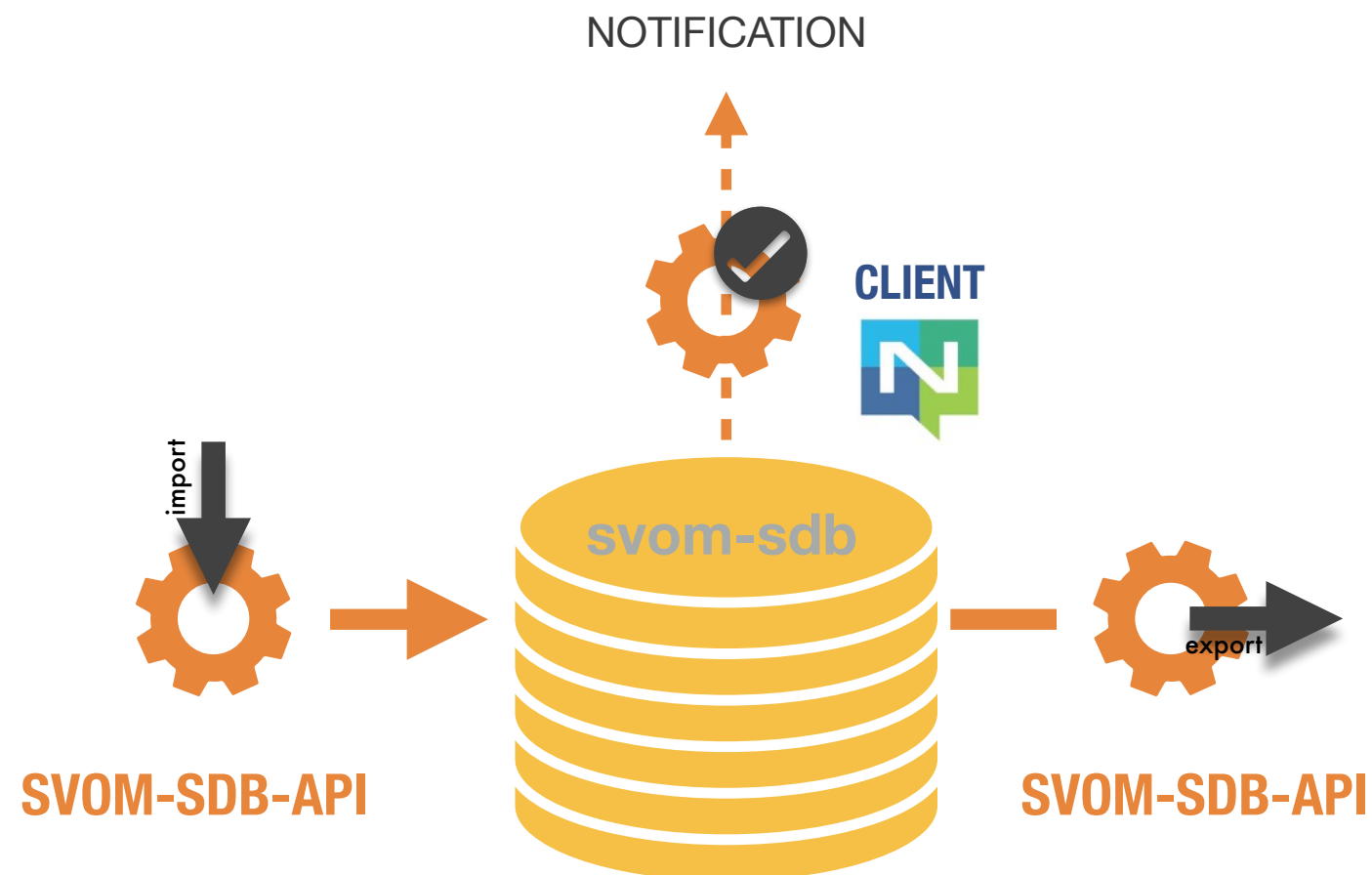


# THE SDB COMPONENTS



the SDB is composed of several components :

- the database svom-sdb
- the import & export API to push & pull data from the svom-sdb

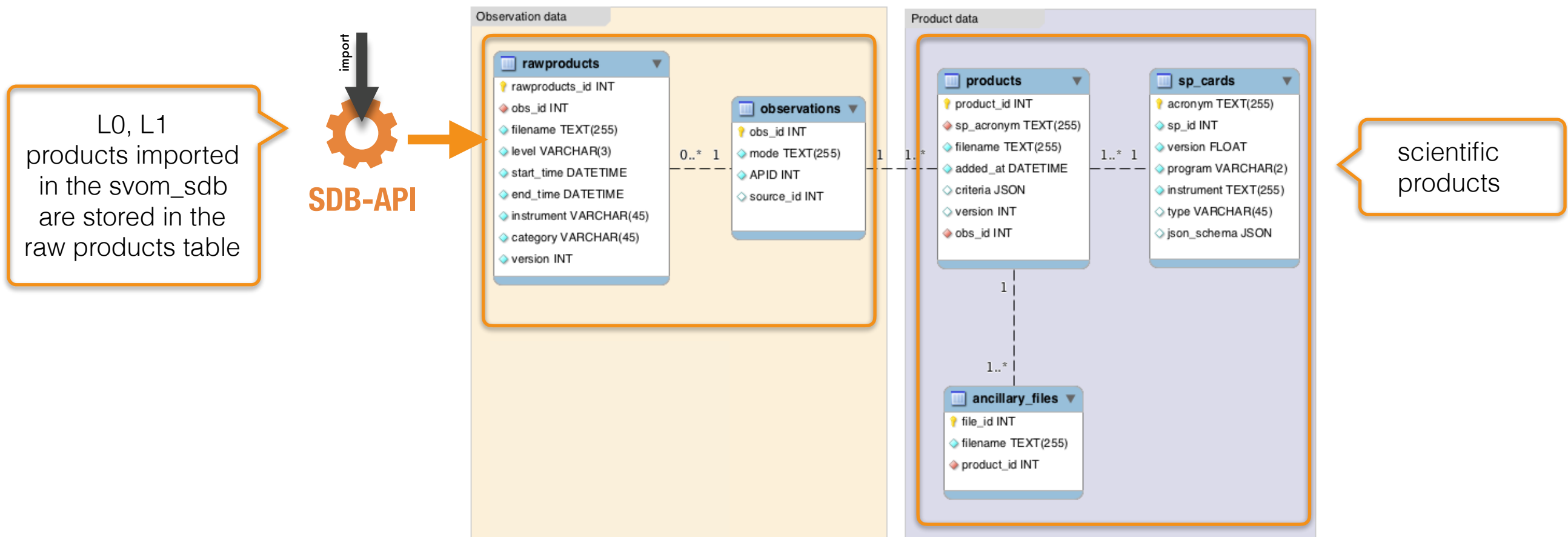




# DC-1 DATA MODEL

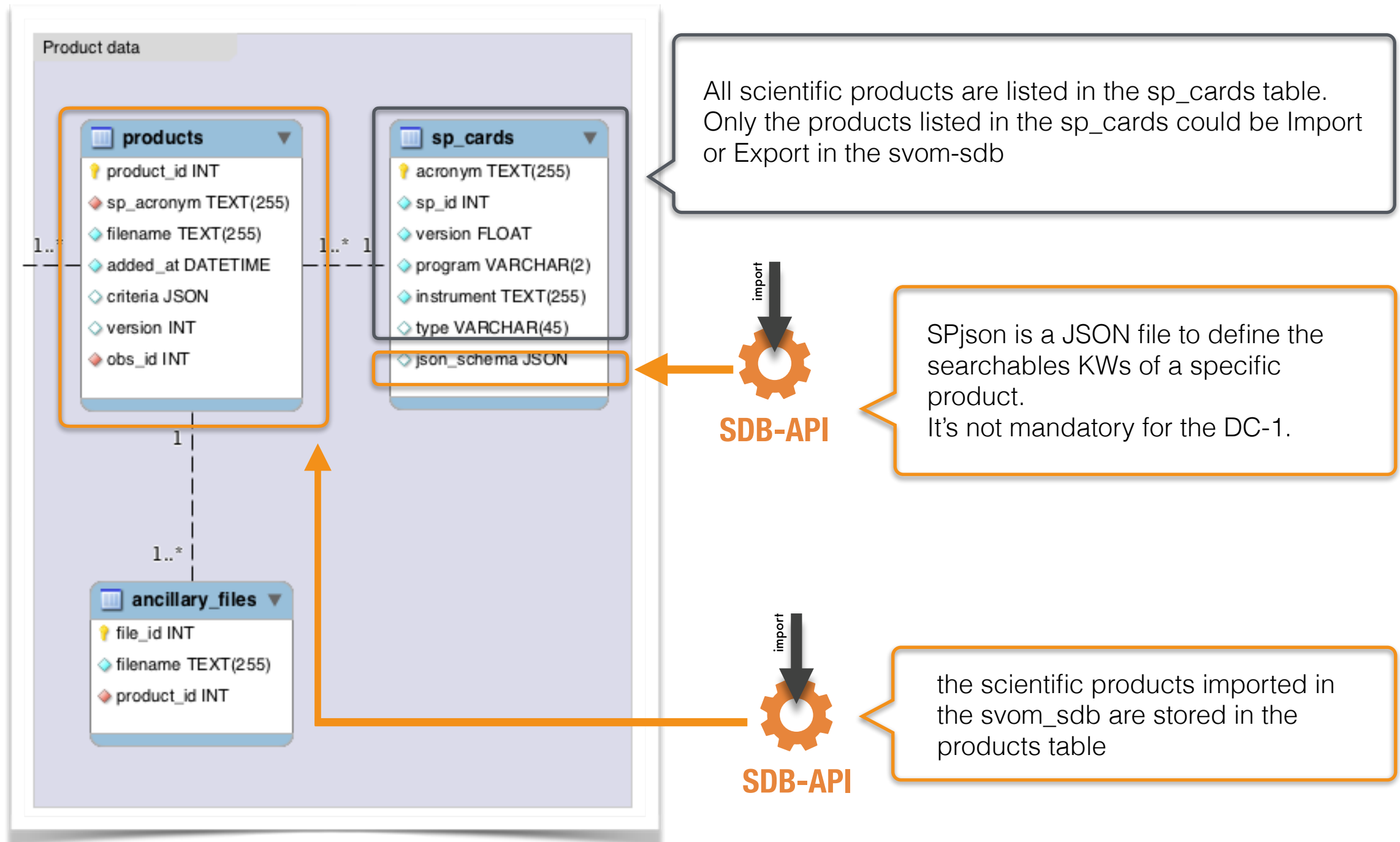


svom-sdb database stores Raw Products and Scientific Products





# SCIENTIFIC PRODUCT DATA





# SCIENTIFIC PRODUCT EXAMPLE



lamtest\_dc1.fits



```
=====
FITS header number 1 at block number 1.
-----
SIMPLE =                T / conforms to FITS standard
BITPIX =                8 / array data type
NAXIS  =                0 / number of array dimensions
EXTEND =                T
CARD   = 'LAMTEST_DC1'
OBS_ID =        4278190334
VERSION =                3
TEST_KW =                13
END
```



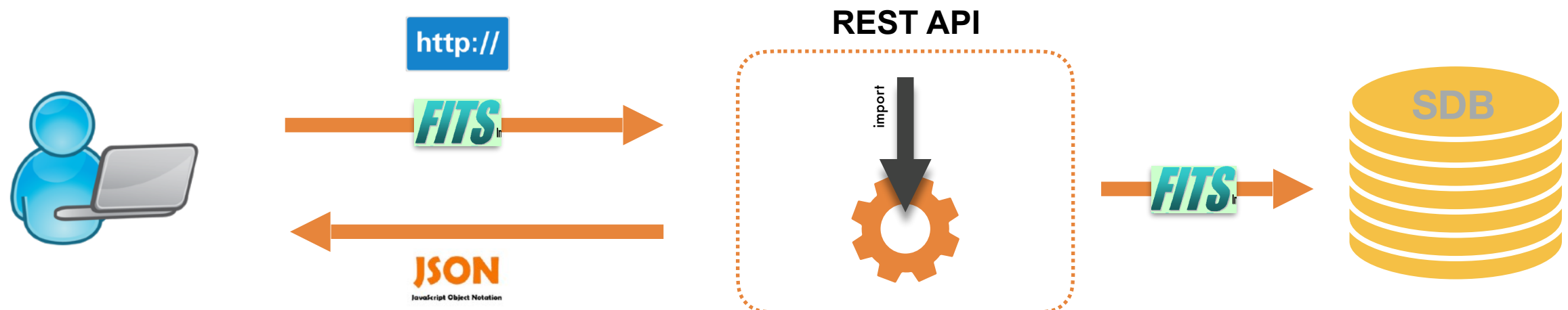
CARD et OBS\_ID are mandatory



# SVOM-SDB IMPORT



\$ curl --form **product=@lamtest\_dc1.fits** [https://SDB-URL/import/v0/add\\_product](https://SDB-URL/import/v0/add_product)



```
{
  "productType": "Scientific product",
  "productId": 92,
  "obsId": 4278190334,
  "programme": "GP",
  "acronym": "LAMTEST_DC1",
  "version": 3,
  "productUrl": "https://SDB-URL/data/products/GP/LAMTEST_DC1/92.fits"
}
```

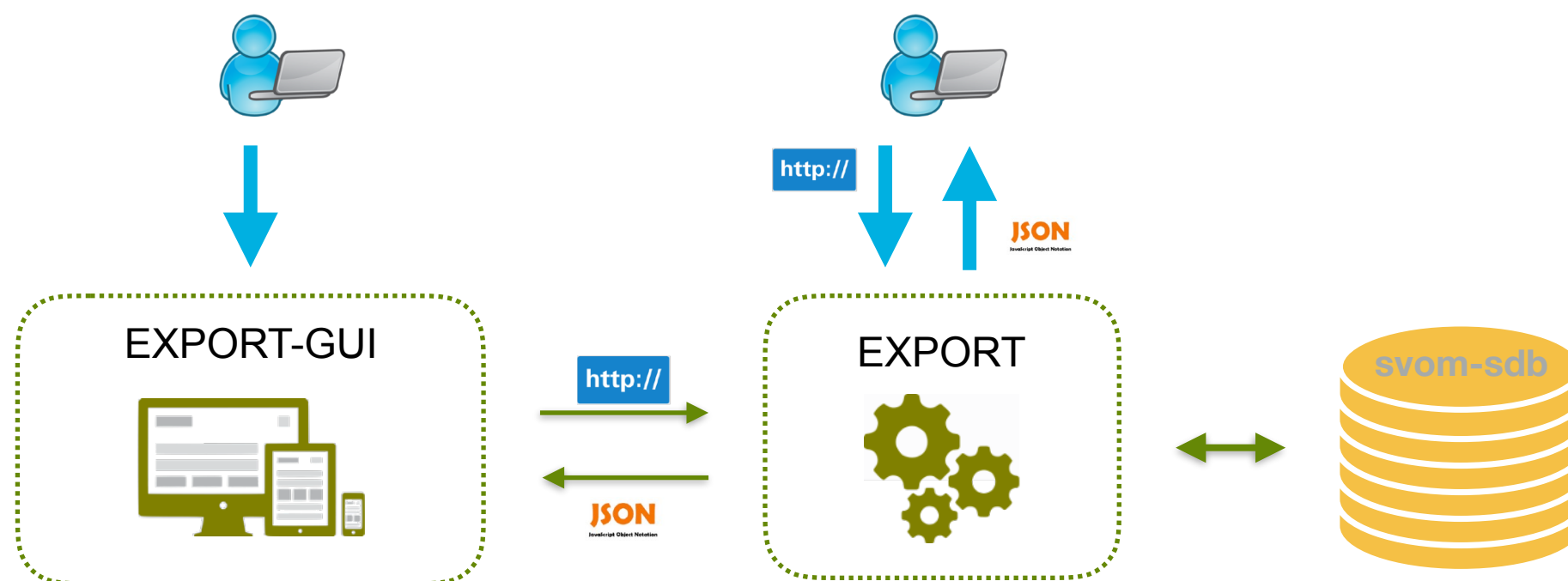


# SVOM-SDB EXPORT



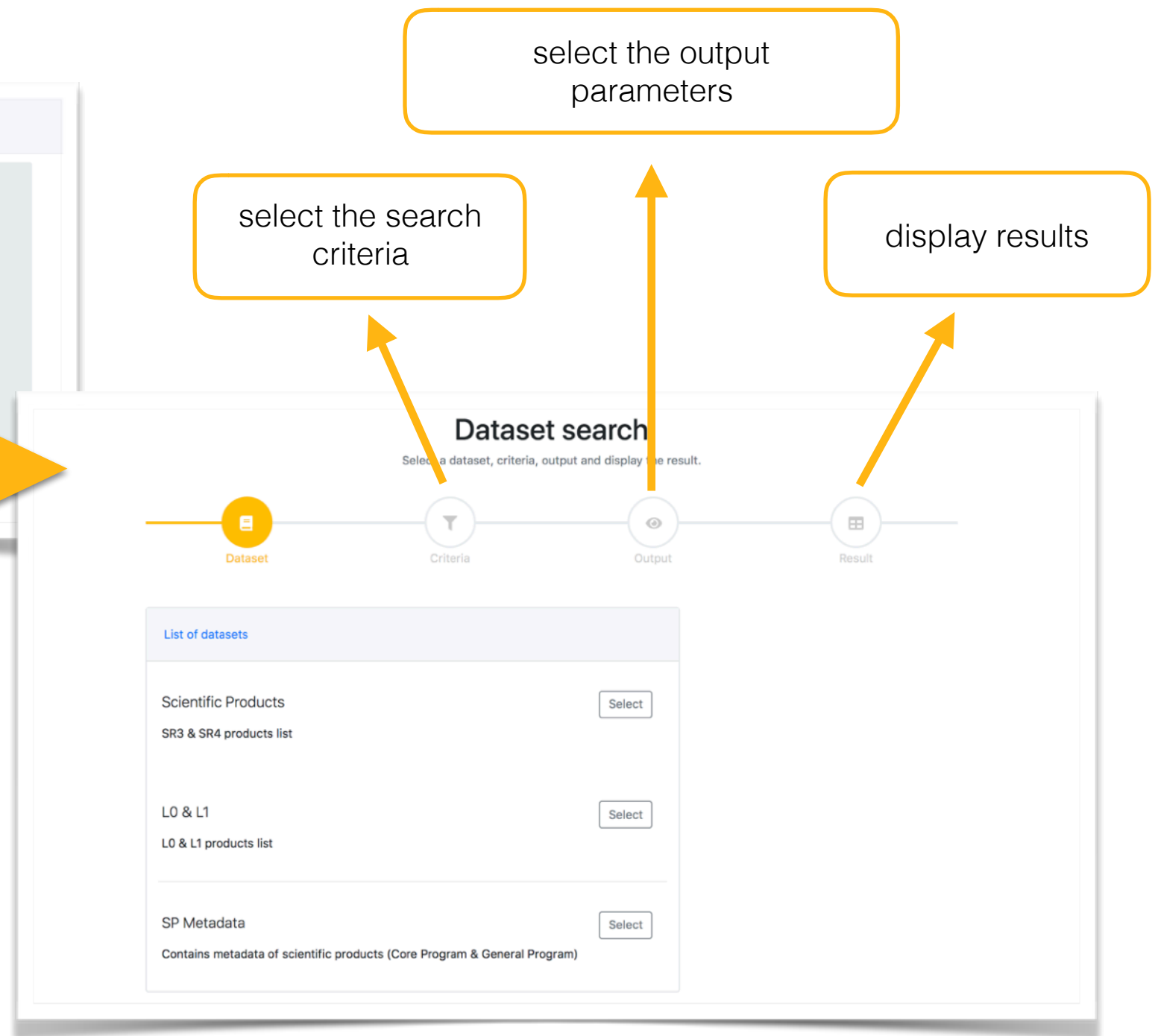
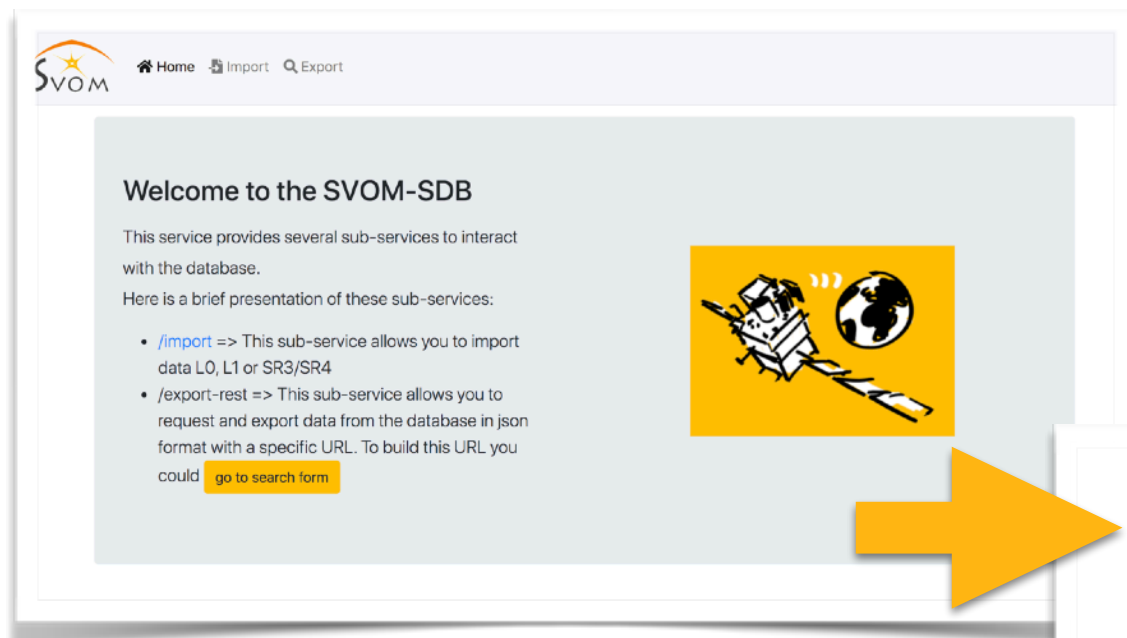
The SVOM-SDB-EXPORT can be used :

- in **online mode** by using the EXPORT API
- with a **web interface** by using the EXPORT-GUI API





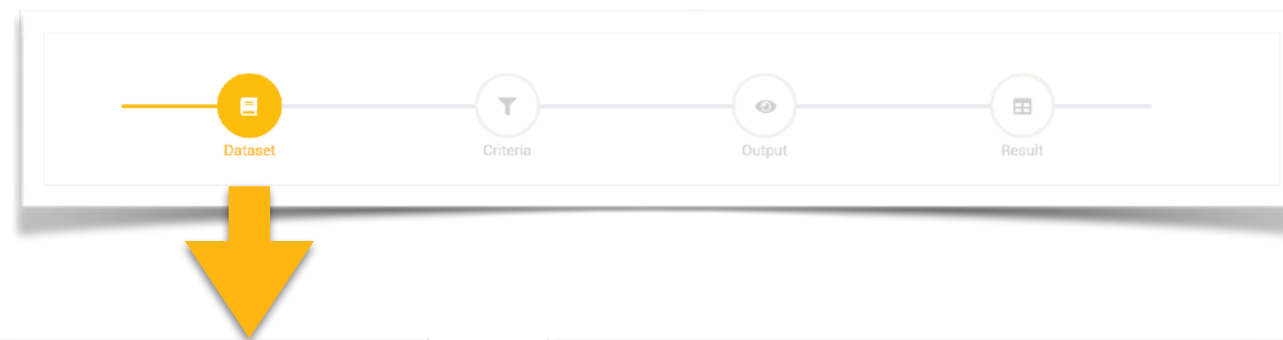
# EXPORT-GUI







# 1 - SELECT DATASET



**List of datasets**

Scientific Products  
SR3 & SR4 products list

Select

L0 & L1  
L0 & L1 products list

Select

SP Metadata  
Contains metadata of scientific products (Core Program & General Program)

Select

**List of datasets**

Scientific Products  
SR3 & SR4 products list

Select

L0 & L1  
L0 & L1 products list

Select

SP Metadata  
Contains metadata of scientific products (Core Program & General Program)

Select

**Search summary**

**Dataset**

SP Metadata

**Criteria**

**No selected criteria**

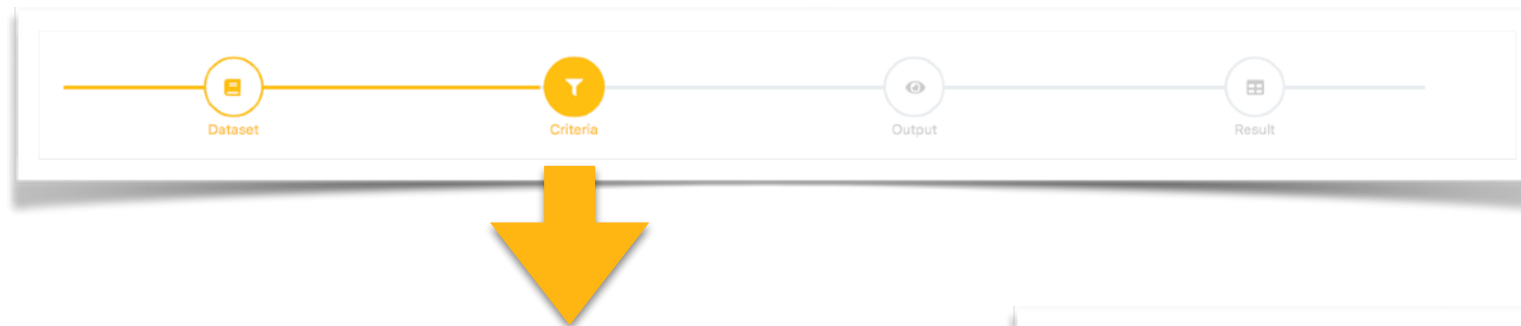
**Output**

Product Acronym  
SP IAP ID  
Version  
Program  
Instrument  
Type  
JSON Schema (original)  
KWs searchable

**Go to result**



## 2 - SELECT CRITERIA



Card ^

Product Acronym

Program

Instrument

Search summary

Dataset

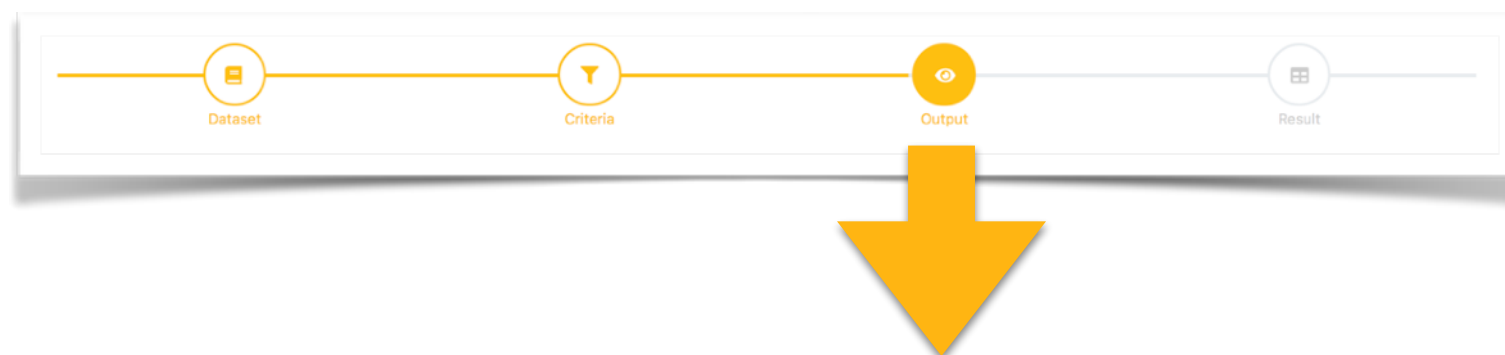
SP Metadata

Criteria

✗ Program eq GP



## 3 - SELECT OUTPUT



Default

Default

- Product Acronym
- SP IAP ID
- Version
- Program
- Instrument
- Type
- JSON Schema (original)
- KWs searchable

Search summary

*Dataset*

SP Metadata

*Criteria*

Program eq GP

*Output*

Product Acronym  
SP IAP ID  
JSON Schema (original)  
KWs searchable  
Version

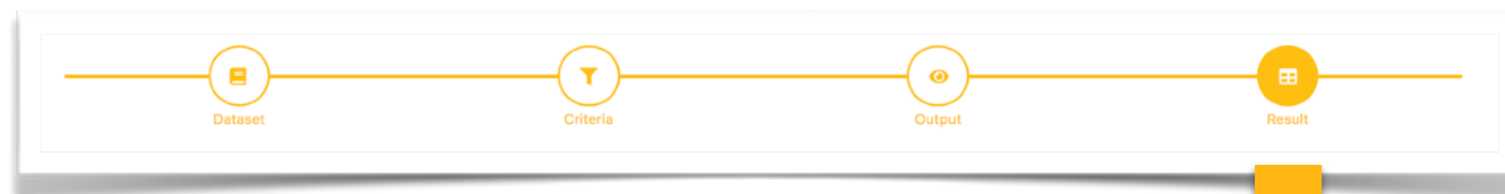
[Go to result ►►](#)



## 4 - DISPLAY RESULT



URL to use online  
the export API



[Direct link to the result \(JSON\) ^](#)

[https://SDB-URL/export-rest/search/data/sp\\_cards?a=1;2;7;8;3&c=4::eq::GP](https://SDB-URL/export-rest/search/data/sp_cards?a=1;2;7;8;3&c=4::eq::GP)



[Datatable ^](#)

acronym	version	program	instrument	type
MXT-EVT-CAL		GP	MXT	EVT
ECL-SKY-IMA	0.1	GP	ECL	SKY_IMA
ECL-SOP-IMA	0.1	GP	ECL	SOP_IMA
LAMTEST_DC1	1	GP	MXT	

### Search summary

#### Dataset

SP Metadata

#### Criteria

Program eq GP

#### Output

Product Acronym  
Version  
Program  
Instrument  
Type



# EXPORT PRODUCT\_ID=92



URL to use online  
the export API

Dataset

Criteria

Output

Result

Direct link to the result (JSON) ^

[https://SDB-URL/export-rest/search/data/sp\\_cards?a=1;2;3;4;5;6&c=1::eq::92](https://SDB-URL/export-rest/search/data/sp_cards?a=1;2;3;4;5;6&c=1::eq::92)

Datatable ^

product_id	obs_id	sp_acronym	filename	criteria	added_at
92	4278190334	LAMTEST_DC1	<a href="https://SDB-URL/data/products/GP/LAMTEST_DC1/92.fits">https://SDB-URL/data/products/GP/LAMTEST_DC1/92.fits</a>	JSON	2019-10-04 09:52:20.106641

Total items 1

First Previous 1 Next Last

Search summary

Dataset

Scientific Products

Criteria

Product ID eq 92

Output

Product ID  
Observation ID  
Product Acronym  
Filename  
Criteria  
Added at

Download FITS file



# EXPORT EXAMPLE



```
$ curl 'https://SDB-URL/export-rest/search/data/products?a=1;2;3;4;6&c=1::eq::92'
```

```
[  
{  
  "product_id":92,  
  "obs_id":4278190334,  
  "sp_acronym":"LAMTEST_DC1",  
  "filename": "https://SDB-URL/data/products/GP/LAMTEST_DC1/92.fits",  
  "added_at":"2019-10-04 09:52:20.106641"  
}  
]
```



# EXPORT TUTO



**`/export-rest/search/data/products?a=1;4&c=1::eq::1`**

## **a : output parameters**

- 1 - Product ID
- 2 - Observation ID
- 3 - Product Acronym
- 4 - Product URL
- 5 - Criteria
- 6 - Added at
- 7 - Version
- 8 - Program
- 9 - Instrument
- 10 - Type

`a=1;4`  
`=> output : product_id, product_url`

## **c : criteria**

- 1 - Product ID
- 2 - Observation ID
- 3 - Product Acronym
- 4 - Product URL
- 5 - Criteria
- 6 - Added at
- 7 - Version
- 8 - Program
- 9 - Instrument
- 10 - Type

`c=1::eq::1`  
`=> criterion : product_id=1`

`c=2::eq::1;3::eq::LAMTEST_DC1`  
`=> criteria : obs_id=1 and sp_acronym=LAMTEST_DC1`

# TO RESUME



## To push a product to the SDB

```
$ curl --form product=@lamtest_dc1.fits https://SDB-URL/import/v0/add\_product
```

## To pull a raw product from the SDB (with id=1)

```
$ curl 'https://SDB-URL/export-rest/search/data/l1?a=1;3&c=1::eq::1'
```

## To pull a scientific product from the SDB (with id=92)

```
$ curl 'https://SDB-URL/export-rest/search/data/products?a=1;4&c=1::eq::92'
```

The SDB-URL for the DC1 will be certainly  
[svom-sdb.lal.in2p3.fr](https://svom-sdb.lal.in2p3.fr)